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1.43 ROM BIOS

The 1.43 ROM BIOS is used with AT&T 6300, OLIVETTI M-24; and XEROX 60/60 series PCs. This is the latest version of the ROM BIOS available for these PC's and is required for such upgrades as: third party video boards, hard disks over 20 MB, extended network support, and extended resident diagnostics.

Included in this package please find:

1. Two PROM Chips (marked 1.43L and 1.43H)

2. A PAL 90 chip (memory decoder chip)

3. 1.43 INSTALLATION INSTRUCTIONS

Tools you will need for installation include:

1. A small, flat blade screw driver

2. A chip removal tool (optional)

CAUTION

The devices you will be handling are SENSITIVE to static electricity. CARE SHOULD BE TAKEN to insure that you do not do anything to allow static to build up on your body. Grounding yourself by touching the case will discharge the static electricity and INSURE safe handling of the Integrated Circuits (ICs). You should ground yourself periodically to insure that you have not built up any additional static electricity.

INSTALLATION GUIDE

STEP ONE: REMOVING THE LOWER COVER

1. If you have a hard disk, park the heads. This is done by using the SHIP command (which comes with most versions of AT&T DOS) or an equivalent program.

2. Unplug the PC.

3. You will be removing the bottom case of the machine, so please turn your PC over so the black cover is up.

4. Loosen the two screws at the back of the machine and slide the bottom case forward approximately 1/2". The cover will now lift off of the main unit and reveal the PC's motherboard.

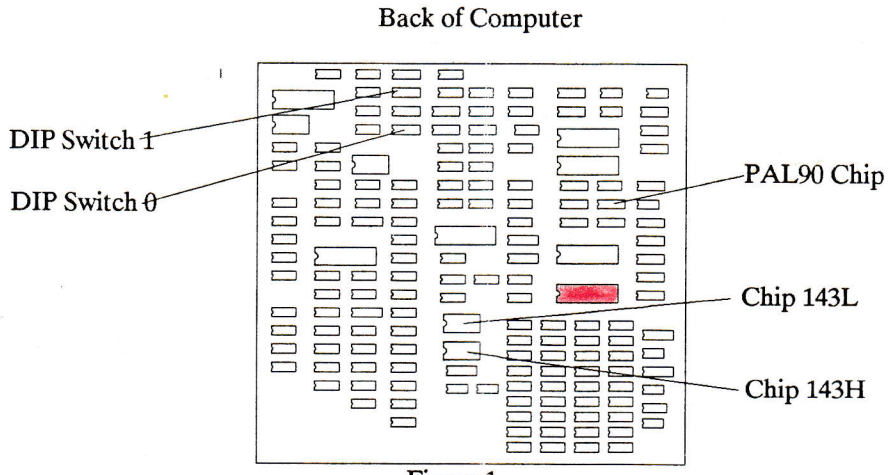

Figure 1

STEP TWO: REPLACING THE PROM CHIPS

1. Locate the two ROM BIOS CHIPS on the motherboard (see figure 1). With either a chip remover or a small blade screw driver, remove the chip marked with an L (1.1L, 1.21L or 1.36L). Replace this chip with the 1.43L chip found in this upgrade kit. PAY ATTENTION to the direction that it plugs in. It MUST have the notch to the same side as the H chip which is still in place. Check carefully for any bent pins.

2. Now remove the chip marked H (1.1H, 1.21H or 1.36H) with the chip in the upgrade kit marked 1.43H. Again, insure the end with the notch faces the correct direction on the motherboard. Check for any bent pins and correct if necessary.

STEP THREE: REPLACE THE PAL CHIP

1. Locate the PAL chip at location 2P. It will be marked with a PAL 49 sticker. This will be replaced with the chip marked PAL 90 found in the upgrade kit. When removing the PAL 49 chip, notice the direction the notch faces. Replace this PAL 49 chip with the PAL 90 chip found in the upgrade kit, insuring the notch faces the correct direction.

STEP FOUR: VERIFYING THE DIP SWITCH SETTINGS

Locate the DIP switches on the motherboard (see figure 1) and verify they are set correctly for your current system. The definition of some of them has changed from earlier ROM BIOS' versions. The following gives the possible settings for each DIP switch block.

DIP Switch 0 Settings (located at position 7T)

1 OFF 2 ON 3 OFF 4 OFF 5 OFF 6 ON 7 ON 8 OFF INSIDE BOARD

Position						
1	2	3	4	8	Amount of Memory	Allocation of memory
Off	On	On	On	On	128K total memory	All memory on mother board
On	Off	On	On	Off	256K total memory	All memory on mother board
Off	Off	On	On	Off	384K total memory	256K memory on mother board, 128K memory on expansion board
On	On	Off	On	Off	512K total memory	256K memory on mother board, 256K memory on expansion board
On	On	On	Off	Off	512K total memory	All memory on mother board, bank 0
Off	On	Off	On	Off	640K total memory	256K memory on mother board, 384K memory on expansion board
Off	On	On	Off	Off	640K total memory	512K memory in bank 0 of mother board, 128K memory in bank 1 of mother board
Off	On	Off	Off	Off	640K total memory	128K memory in bank 0 of mother board, 512K memory in bank 1 of mother board.
Position 5					Funtion	Description
Off	IF INSTALLED				There is a math coprocessor	Set if you have an 8087-2
On					There is NOT a math coprocessor	Set if you do NOT have an 8087-2
Position 6					Function	Description
Off					System using Z8530 serial controller	This is if there are 2 serial ports built into the system.
On					System using 8250 serial controller	This is the normal configuration. It is for a single serial port built into the system.
Position 7	ON ?				Not used	

DIP Switch 1 Settings (located at position 7W)

Position 1	Function	Description
Off	96 Tracks per inch floppy	Used for 720K, 3.5 inch drives
On	48 Tracks per inch floppy	Used for 360K, 5.25 inch drives
Position 2	Function	Description
Off	Fast startup for floppy drives (250mS)	This may work with some drives and will have slightly faster access
On	Slow startup for floppy drives (800mS)	This is the normal setting
Position 3	Function	Description
Off	Use hard disk code on hard disk controller	This option for most addon drives not installed by AT&T.
On	Use ROM BIOS hard disk code	This option normally for AT&T installed hard drives
Position 4	Function	Description
Off	Slow video scroll speed	Used by slow video controllers only
On	Normal video scroll speed	Used for most all video cards
Positions 5 and 6	Function	Description
5 off, 6 off	IBM monochrome display	Mainly for Hercules cards
5 on, 6 off	80x25 CGA text	Normal AT&T color or monochrome display
5 off, 6 on	40x25 text	Not normally used
5 on, 6 on	EGA/VGA	EGA and VGA cards use this setting
Positions 7 and 8	Function	Description
7 off, 8 off	4 floppy drives	Not used
7 on, 8 off	3 floppy drives	Not used
7 off, 8 on	2 floppy drives	
7 on, 8 on	1 floppy drive	

STEP FIVE: VERIFY OPERATION

After everything has been installed and the dip switches checked, power the computer on. If there are any problems, see the trouble shooting section on the last page of the installation instruction.

STEP SIX: REPLACING THE BOTTOM COVER

Put the bottom cover back on by reversing the removal procedure.

TROUBLE SHOOTING

Symptom	Recommended action
Keyboard LEDs never stop blinking (system hangs)	1. Check that the ROM chips and the PAL chip are all plugged in with the correct orientation. 2. Check for any bent pins on the ROM or PAL chips. 3. Check that the memory configuration is correct on DIP switch 1, positions 1, 2, 3, 4, and 8.
Keyboard lights stop blinking, but the display remains blank.	1. Check for the correct video board settings. These are switches 5 and 6 on DIP switch 1. 2. Spray a cleaner, like a TV tuner cleaner onto (into) the DIP switches and move the switches back and forth several times. The switch contacts can become dirty with age.
8087 is installed, but does not show up in the resident diagnostics.	Check for the correct position of 5 on DIP switch 0.
The incorrect amount of memory is displayed from what is in the system.	Check DIP switch 0, positions 1, 2, 3, 4 and 8 for the correct settings for your memory configuration.
The computer hangs on bootup after the resident diagnostics when booting from hard disk.	1. Check the setting of position 3 of DIP switch 1. This may need to be in the opposite position. 2. If the hard disk was installed by AT&T, there are some changes that may be required to the hard disk controller card. Please call W. Allen Associates for details.

Warranty

The 1.43 BIOS Upgrade is warranted functional on installation. This warranty does not cover accidental damage, misuse, misapplication or damage resulting from installation, modification or service. Our liability is limited to the purchase price of the product.

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